

R E M A R K S

The office action of 07-16-2004 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 1 through 12 remain in this case.

Preliminary Comments

The claims were amended as follows, to correct typographical errors and other informalities. No new matter was introduced. Specifically:

Claim 10 was amended to correct typographical errors.

Objections Claim

Claim 10 is objected to because of the following informalities: The numeral "2" in line 6 after the period needs to be deleted. Appropriate correction is required.

Applicant thanks the Examiner for pointing out the informality. Appropriate correction is done. Specifically, in claim 10

10. (Currently amended) The system of claim 7, wherein the method further comprising the steps of setting the error to zero if a third set of conditions are met.†

Reconsideration and withdrawal of the objection is respectfully requested.

Rejection(s) under 35 U.S.C. §102

Claims 1,4,5,7,10,11 are rejected under 35 U.S.C. 102(e) as being anticipated by Quinn (US2003/0230262).

The Office Action starts, inter alia:

Regarding claims 1,7: Quinn discloses in a VCT control system having a predetermined set point with a set point value (see numeral 12) and a set point filter filtering the set point and deriving a filtered set point value (see paragraph 0062), the control system generates an error signal by subtracting the measured phase value from the filtered set point value (see figure 1,3), the control system has a control law for processing the error signal or "an error zero treatment block" having the set point value and the filtered set point value, the error zero treatment block comprising a method generating an error signal (see paragraphs 0059,0062), and the control system further has a method for modifying the error signal for reducing the excessive VCT response time caused by VCT undershooting its filtered set point, the method comprising the steps of: providing an initial error; setting the initial error as the error subtracting the set point value from a phase value if a first set of conditions are met; and setting the difference of the above step as the error (see paragraph 0059).

Quinn teaches feedback loop for controlling a phaser angular relationship, a control law disposed to receive a plurality of **set point values** and a plurality of feed back values is provided to include: a computation block for receiving the plurality of **set point** values as inputs, the computation block outputting a first output and a second output; a first summer for summing the first output and the plurality of feed back values to produce a **first sum** (e.sub.0); a phase integrator and a phase compensator receiving the first sum (e.sub.0) and derivatives (e.sub.1) thereof outputting a processed value (e.sub.2); an amplifier amplifying the second output by a predetermined scale (K.sub.0); and e) a second summer for summing the processed value (e.sub.2) and the amplified second output to produce a second sum (e.sub.3). In other words, Quinn is related to modifying **the set point** of a predetermined neighborhood of setpoints.

Claims 1 and 7 recites, respectively:

1. In a VCT control system having a predetermined set point with a set point value and a set point filter filtering the set point and deriving a filtered set point value, the control system generates **an error** signal by subtracting the measured phase value from the filtered set point value, the control system has a control law for processing the **error signal**, and the control system further has a method for modifying **the error signal** for reducing the excessive VCT response time caused by VCT *undershooting its filtered set point*, the method comprising the steps of:

providing an **initial error**;

setting the initial error as **the error**

subtracting the set point value from a phase value if a **first set of conditions** are met; and

setting **the difference** of the above step as **the error**. (Emphasis added)

7. A VCT control system comprising:

a predetermined set point with a set point value;

a set point filter filtering the set point and deriving a filtered set point value;

an error signal generated by the control system through subtracting the measured phase value from the filtered set point value; and

an error zero treatment block having the set point value and the filtered set point value, the error zero treatment block comprising a method generating an error signal for reducing the excessive VCT response time caused by VCT *undershooting its filtered set point*, the method comprising the steps of:

providing an **initial error**;

setting the initial error as **the error**

subtracting the set point value from a phase value if a first set of conditions are met; and

setting the difference of the above step as **the error**. (Emphasis added)

As can be seen, Quinn is concerned with a system and method relating to a set point change, NOT error signal as claimed by the present invention.

Therefore, it is respectfully suggested that the rejection of independent claims 1 and 7 as being anticipated by *Quinn* is overcome. Dependent claims 4, 5, 10, and 11, being dependent

upon and further limiting independent claims 1 and 7 respectively, should also be allowable for that reason, as well as for the additional recitations they contain. Reconsideration and withdrawal of the rejection are respectfully requested.

Allowable Subject Matter

Claims 2,3,6,8,9,12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant gratefully acknowledges Examiner's statement that claims 2, 3, 6, 8, 9, and 12 are allowable. However, Applicant believes that independent claims 1 and 7, as they stand, are allowable. Claims 2, 3, 6, 8, 9, and 12 by virtue of their dependency, should be allowable. Therefore, applicant respectfully requests the Examiner to reconsider and withdraw of the objection. Reconsideration and withdrawal of the objection are respectfully requested.

Note

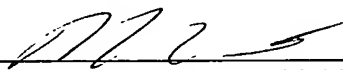
It should be noted that Quinn and the present application are commonly assigned to BorgWarner. See attached assignment papers, Exhibit A-B.

Conclusion

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

Respectfully Submitted:
Zhenyu Jiang

By: 
Frank F. Tian Reg. No. 46,462
Agent for Applicant

BROWN & MICHAELS, P.C.
400 M&T Bank Building - 118 N. Tioga St.
Ithaca, NY 14850
(607) 256-2000 • (607) 256-3628 (fax)
e-mail: docket@bpmlegal.com
Dated: July 30, 2004